Claim 1 (Amended). Porous membranes of (per)fluorinated amorphous polymers having a porosity in the range 5 - 500 nm, determined by an atomic force electronic microscope, wherein 80% - 90% of the pores have a size ranging from minus 5 nm to plus 5 nm of the value of the distribution maximum peak.

Claim 3 (Amended). Porous membranes of (per)fluorinated amorphous polymers according to claim 1, the (per)fluorinated polymers selected from the group consisting of:

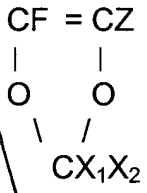
A) polymers of one or more monomers having structure (II):

$$CF_2=CY_1CY_2 \qquad (II)$$

wherein: Y_1 and Y_2 are selected from F, Cl, CF_3, OR_f

wherein R_f is a C_1 - C_5 perfluoroalkyl radical;

with one or more comonomers having the following structures:



(I)

wherein: Z is selected from F, R_f, OR_f; R_f is a perfluoroalkyl radical C_1 - C_5; X_1 and X_2 are selected from F and CF_3;

bisvinyloxymethanes having structure (III):

$$CFX^1=CX^2\text{-}O\text{-}CX^3X^4\text{-}O\text{-}CX^2=CX^1F \qquad (III)$$

wherein X^1 and X^2, equal to or different from each other, are F, Cl; X^3 and X^4, equal to or different from each other, are F or CF_3;

dienes having structure (IV);

$$CF_2=CF-O-(CF_2)_n-CF=CF_2 \qquad (IV)$$

wherein n = 1 - 5;

or

B) homopolymers of monomers having structure (I) or (III) or (IV);

C) copolymers of monomers having structure (I) or (III) or (IV).

Claim 5 (Amended). Porous membranes of (per)fluorinated amorphous polymers according to claim 3, wherein the dioxole percentage having structure (I) is in the range 40%-90% by moles.

Claim 7 (Amended). Porous membranes of (per)fluorinated amorphous polymers according to claim 3, wherein the monomers having structure (II) are selected from tetrafluoroethylene, perfluoroalkylvinylethers (C_1-C_5), hexafluoropropene, chlorotrifluoroethylene.

Claim 16 (Amended). A ultrafiltration or nanofiltration separation process wherein a solution containing a solute is contacted with the porous membrane of claim 1.

Please add new claims 17-23 as follows.

Claim 17 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 1 having a porosity in the range 20-100 nm.

Claim 18 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 3, wherein Z is OR_f.

Claim 19 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 3, wherein X^1 and X^2, equal to or different from each other, are F.

Claim 20 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 3, the dienes having structure (IV) wherein n = 1 - 2.

Claim 21 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 5, wherein the dioxole percentage having structure (I) is in the range 50% - 85% by moles.

Claim 22 (New). Porous membranes of (per)fluorinated amorphous polymers according to claim 7, wherein the monomers having structure (II) are tetrafluoroethylene.

Claim 23. (New). A method for purifying a fluid containing gas impurities by contacting said fluid with the membranes of claim 1.